IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT	:	Stephen Miller
SERIAL NO.	:	10/726003
FILED	:	November 12, 2003
TITLE	:	Collapsible Structure Frame
ART UNIT	:	3636
EXAMINER	:	Winnie S. Yip
DOCKET NO.	:	9539a
CUSTOMER NO.	:	021905

December 13, 2006

Commissioner of Patents
P. O. Box 1450
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APPLICANT'S BRIEF (revised)

Real Party In Interest

The real party in interest is the inventor, Stephen Miller.

Related Appeals and Interferences

None.

Status of Claims

Claims 1 through 60 were previously cancelled and new Claims 61 through 72 were added in reply to the Office Action of November 18, 2004. Concurrently with filing APPLICANT'S BRIEF (revised), Claims 63 through 72 were cancelled, leaving only Claims 61 and 62, which are both under final rejection, are both on appeal, and are both included in the attached Appendix A. The claim language that Applicant believes distinguishes his invention from the prior art in Claims 61 and 62 is "... ***said tensioning member ... to form ... flexible joint...***"

Status of Amendments

There was an amendment after Final rejection limiting the claims on appeal to Claims 61 and 62.

Summary Of Claimed Subject Matter

Claim 61

The claimed collapsible support structure is shown in FIGS. 1, 4A and 5 and disclosed on pages 14 through 19, and pages 22 and 23, in particular to pages 17 through 19.

Claim 61 calls for the collapsible support structure to comprise

> "... a plurality of interconnected frame sections each comprising each comprising first and second elongated rigid members each having first and second ends, said first ends of the first and second elongated rigid members being operably connected together to form a first flexible joint..."

This structure is disclosed on page 14, lines 22-23, showing a frame 10 that may be a truncated icosahedron geodesic structure. Page 15, lines line 7 through 28, discloses that the structure 10 may include a plurality of generally vertical sections 12a, b, c, d and e. Each of the sections 12 a, b, c, d and e may include a first elongated rigid member 14a, a second elongated rigid member 14b and a third elongated rigid member 14c where the third elongated rigid member 14c may also comprise the first elongated rigid member in an adjoining section 12b, which may also contain a second elongated rigid member 14b' and a third elongated rigid member 14c'. ***As shown in Figs. 4A, a rope 42 functions as a flexible joint and also connects the frame sections 12a, b, c, d and e.***

Flexible joints are disclosed on page 16, lines 20 to 24, stating the structure 10 "...at six points along the top of the vertical walls formed by the sections 12a, b, c, d and e five triangles meet at each vertex, e.g., 80a or 80b shown in Fig.'s 1-3. At the vertexes along the base formed by the collapsible members 32a, b, c, d and e, only

three triangles meet at each vertex." ***Again as shown in Fig. 5, a rope 40 functions as a flexible joint at the vertex 80a.***

Claim 61 also calls for

> "... a collapsible elongated member operably connected between the second ends of the first and second elongated rigid members, said collapsible elongated member having a rigid state and a collapsed state and comprising a pair of rigid tubular members having a portion of an elongated flexible tensioning member extending through said pair, a rigidizing member mounted to move along said pair, said rigidizing member being moveable into a position to engage each rigid tubular member when said rigid tubular members are essentially axially aligned to form the rigid state of the collapsible elongated member..."

As stated on page 15, lines 14 and 15, each "...of the sections 12a, b, c, d and e may have an upper collapsible member 30 a, b, c, d and e and a lower collapsible member 32 a, b, c, d and e...." As stated on page 15, lines 21 and 24, each "...It can be seen that each of the sections 12a, b, c, d and e form the essentially vertical side walls of the structure with the collapsible members 30 a, b, c, d and e and the collapsible members 32a, b, c, d and e forming the sides of a pentagon polygon."

As stated on page 18, lines 16 and 28, "...in Fig. 4(a) it can be seen

that the collapsible member 30a and 32a (not shown in Fig. 4) may be formed by a pair of hollow cylindrical tubes 62 and 64 and an outer tubular sleeve 70. In the embodiment shown in fig. 4 the pair of tubes 62, 64 extend substantially the length of the base of the respective upright and inverted triangular portions 50a and 52a and the outer sleeve 70 slideably engages both the tube 60 and the tube 62 when the respective upper or lower collapsible member, e.g., lower collapsible member 32a is in the rigidized configuration. The abutment of the tubes 60 and 62 at junction 72 is illustrated in Fig. 4(a). This abutment serves to hold the rigidized collapsible member 32a in compression when the tensile forces exerted, e.g., by tightening the rope 42 around the lesser circle traveled by the rope 42 (along with the similar action of the upper rope (not shown) gives the structure 10 its structural rigidity."

As stated on page 22, lines 23 through 29 and page 23, lines 1 and 2, and shown in Fig. 5, the rope 42 is the "...tensioning means at, e.g., the base and the top of the vertical side walls of the structure 10 may be formed by rope or cable or the like and may be brought into tension simply by pulling on the rope or cable at a vertex, e.g. 80b and similarly, e.g., 82b, with the rope or cable attached, e.g., to an eyelet 18 on one of the dowels 18 forming part of the vertex, and looped through the other eyelet at the vertex, such that the tensionizing rope or cable exerts tension between each of the vertices, while the collapsible members 30a, b, c, d and e, or 32a, b, c, d and e, as applicable, are placed in compression."

Claim 61 also calls for

> "... said ***tensioning member*** being ***operably connected*** between the second ends of the first and second elongated rigid members ***to form second flexible joints thereat***, each said second flexible joint being operably connected to an adjacent frame section."

As shown in Figs. 4 and 5, the ropes 40 and 42 each function as a flexible joint at the vertices. This structure is discussed in connection with Fig. 4A, page 17, lines 15 through 29, and page 18, lines 1 though 29, and page 19 lines 1 through 28. As disclosed, "...the apex 82b of the section 12a of the vertical walls of the structure 10 is shown in more detail to explain the interrelationship between the rigid members 14 a, b and c, and the collapsible members 30a and by example 30b forming the section 12a ... A lower flexible tensional circumferential support member, e.g., a length of rope 42 or cable, may extend through the lower collapsible support member 32a (shown in phantom by dotted/dashed lines) and through the pair of eyelets 18 on the lower ends of the dowels 16 forming the elongated rigid members 14b and 14c. ... Thus it can be seen that the section 12a can be in the form of a parallelogram, with the corners of the parallelogram formed by upper junctions 80a and b and the lower junctions 82a and b, with the upper collapsible member between 80a and b forming the base of the inverted triangular portion 52a and the lower collapsible member 32a forming the base of the upright triangular portion 50a of the section 12a."

In Fig. 4A, "... it can be seen that the collapsible member 30a and 32a may be formed by a pair of hollow cylindrical tubes 62 and 64 and an outer tubular sleeve 70. In the embodiment shown in fig. 4 the pair of tubes 62, 64 extend substantially the length of the base of the respective upright and inverted triangular portions 50a and 52a and the outer sleeve 70 slideably engages both the tube 60 and the tube 62 when the respective upper or lower collapsible member, e.g., lower collapsible member 32a is in the rigidized configuration. The abutment of the tubes 60 and 62 at junction 72 is illustrated in Fig. 4(a). This abutment serves to hold the rigidized collapsible member 32a in compression when the tensile forces exerted, e.g., by tightening the rope 42 around the lesser circle traveled by the rope 42 (along with the similar action of the upper rope (not shown) gives the structure 10 its structural rigidity.

Fig. 4(b) shows that the outer sleeve 70 is of a length that it can be slideably moved to enclose only the one or the other of the two tubes 60, 62, such that the rigidity provided by the sleeve 70 engaging both the tubes 60 and 62 is eliminated. This enables the respective ends of the elongated rigid structural members, e.g., 14a, b and c, the former two of which were maintained in separation by the collapsible member 32a being rigidized, to move toward each other, enabling collapsing and folding of the structure 10, when done in conjunction with similarly removing the rigidity of each of the collapsible members 30a, b, c, d and e and 32a, b, c, d and e.

Fig. 5 shows a more detailed view of an embodiment of an upper terminal junction or apex 80(a) according to the present invention. The eyelets 18 for each of the dowels 16 forming verticle poles 14a and 14b and roof pole 22a are joined by having the rope

of cable 40 forming the upper flexible circumferential support member threaded through them and passing through the adjacent hollow tubes 64 of the upper collapsible member 30e and 62 of the upper collapsible member 30a, with the vertical poles 14a and 14b forming a triangular portion of section 12a and roof pole 22a extending to the top of the structure 10."

Claim 62

The same sections of the specification disclosing the structure of Claim 61 also discloses the structure of Claim 62. Specifically, the claimed collapsible support structure is shown in FIGS. 1, 4A and 5 and disclosed on pages 14 through 19, and pages 22 and 23, in particular to pages 17 through 19.

Claim 62 calls for the collapsible support structure to comprise

> "...a plurality of interconnected frame sections each comprising a pair of elongated rigid members each having first and second ends, said first ends being operably connected by a flexible joint ..."

This structure is disclosed on page 14, lines 22-23, showing a frame 10 that may be a truncated icosahedron geodesic structure. Page 15, lines line 7 through 28, discloses that the structure 10 may include a plurality of generally vertical sections 12a, b, c, d and e. Each of the sections 12 a, b, c, d and e may include a first elongated rigid member 14a, a second elongated rigid member 14b and a third

elongated rigid member 14c where the third elongated rigid member 14c may also comprise the first elongated rigid member in an adjoining section 12b, which may also contain a second elongated rigid member 14b' and a third elongated rigid member 14c'. ***As shown in Figs. 4A, a rope 42 functions as a flexible joint and also connects the frame sections 12a, b, c, d and e.***

Flexible joints are disclosed on page 16, lines 20 to 24, stating the structure 10 "...at six points along the top of the vertical walls formed by the sections 12a, b, c, d and e five triangles meet at each vertex, e.g., 80a or 80b shown in Fig.'s 1-3. At the vertexes along the base formed by the collapsible members 32a, b, c, d and e, only three triangles meet at each vertex." ***Again as shown in Fig. 5, a rope 40 functions as a flexible joint at the vertex 80a.***

As stated on page 15, lines 14 and 15, each "...of the sections 12a, b, c, d and e may have an upper collapsible member 30 a, b, c, d and e and a lower collapsible member 32 a, b, c, d and e...." As stated on page 15, lines 21 and 24, each "...It can be seen that each of the sections 12a, b, c, d and e form the essentially vertical side walls of the structure with the collapsible members 30 a, b, c, d and e and the collapsible members 32a, b, c, d and e forming the sides of a pentagon polygon."

In addition to a pair of elongated rigid members, Claim 62 calls for each frame section also include

"...a collapsible elongated member having a collapsed state and a rigid state, said collapsible elongated member including a pair of tubular members..."

As stated on page 18, lines 16 and 28, "...in Fig. 4(a) it can be seen that the collapsible member 30a and 32a (not shown in Fig. 4) may be formed by a pair of hollow cylindrical tubes 62 and 64 and an outer tubular sleeve 70. In the embodiment shown in fig. 4 the pair of tubes 62, 64 extend substantially the length of the base of the respective upright and inverted triangular portions 50a and 52a and the outer sleeve 70 slideably engages both the tube 60 and the tube 62 when the respective upper or lower collapsible member, e.g., lower collapsible member 32a is in the rigidized configuration. The abutment of the tubes 60 and 62 at junction 72 is illustrated in Fig. 4(a). This abutment serves to hold the rigidized collapsible member 32a in compression when the tensile forces exerted, e.g., by tightening the rope 42 around the lesser circle traveled by the rope 42 (along with the similar action of the upper rope (not shown) gives the structure 10 its structural rigidity."

Claim 62 also calls for

"...an elongated ***flexible tensioning member*** extending through said tubular members and operably connected between the second ends of the first and second elongated rigid members and to adjacent frame sections ***to form*** at each second end a ***flexible joint.***"

As shown in Figs. 4 and 5, the ropes 40 and 42 each function as a flexible joint at the vertices.

As stated on page 22, lines 23 through 29 and page 23, lines 1 and 2, and shown in Fig. 5, the rope 42 is the "...tensioning means at, e.g., the base and the top of the vertical side walls of the structure 10 may be formed by rope or cable or the like and may be brought into tension simply by pulling on the rope or cable at a vertex, e.g. 80b and similarly, e.g., 82b, with the rope or cable attached, e.g., to an eyelet 18 on one of the dowels 18 forming part of the vertex, and looped through the other eyelet at the vertex, such that the tensionizing rope or cable exerts tension between each of the vertices, while the collapsible members 30a, b, c, d and e, or 32a, b, c, d and e, as applicable, are placed in compression."

This structure is further discussed in connection with Fig. 4A, page 17, lines 15 through 29, and page 18, lines 1 though 29, and page 19 lines 1 through 28. As disclosed, "...the apex 82b of the section 12a of the vertical walls of the structure 10 is shown in more detail to explain the interrelationship between the rigid members 14 a, b and c, and the collapsible members 30a and by example 30b forming the section 12a ... A lower flexible tensional circumferential support member, e.g., a length of rope 42 or cable, may extend through the lower collapsible support member 32a (shown in phantom by dotted/dashed lines) and through the pair of eyelets 18 on the lower ends of the dowels 16 forming the elongated rigid members 14b and 14c. ... Thus it can be seen that the section 12a can be in the form of a parallelogram, with the corners of the

parallelogram formed by upper junctions 80a and b and the lower junctions 82a and b, with the upper collapsible member between 80a and b forming the base of the inverted triangular portion 52a and the lower collapsible member 32a forming the base of the upright triangular portion 50a of the section 12a."

In Fig. 4A, "... it can be seen that the collapsible member 30a and 32a may be formed by a pair of hollow cylindrical tubes 62 and 64 and an outer tubular sleeve 70. In the embodiment shown in fig. 4 the pair of tubes 62, 64 extend substantially the length of the base of the respective upright and inverted triangular portions 50a and 52a and the outer sleeve 70 slideably engages both the tube 60 and the tube 62 when the respective upper or lower collapsible member, e.g., lower collapsible member 32a is in the rigidized configuration. The abutment of the tubes 60 and 62 at junction 72 is illustrated in Fig. 4(a). This abutment serves to hold the rigidized collapsible member 32a in compression when the tensile forces exerted, e.g., by tightening the rope 42 around the lesser circle traveled by the rope 42 (along with the similar action of the upper rope (not shown) gives the structure 10 its structural rigidity.

Fig. 4(b) shows that the outer sleeve 70 is of a length that it can be slideably moved to enclose only the one or the other of the two tubes 60, 62, such that the rigidity provided by the sleeve 70 engaging both the tubes 60 and 62 is eliminated. This enables the respective ends of the elongated rigid structural members, e.g., 14a, b and c, the former two of which were maintained in separation by the collapsible member 32a being rigidized, to move toward each other, enabling collapsing and folding of the structure 10, when done in conjunction with similarly removing the rigidity of each of

the collapsible members 30a, b, c, d and e and 32a, b, c, d and e.

Fig. 5 shows a more detailed view of an embodiment of an upper terminal junction or apex 80(a) according to the present invention. The eyelets 18 for each of the dowels 16 forming verticle poles 14a and 14b and roof pole 22a are joined by having the rope of cable 40 forming the upper flexible circumferential support member threaded through them and passing through the adjacent hollow tubes 64 of the upper collapsible member 30e and 62 of the upper collapsible member 30a, with the vertical poles 14a and 14b forming a triangular portion of section 12a and roof pole 22a extending to the top of the structure 10."

Grounds of Rejection

The grounds for rejecting Claims 61 and 62 are that the subject matter of these claims is lacks novelty under 35 USC 102(b), being anticipated by Brady et al (U. S. 5,423,341).

Argument Traversing Grounds Of Rejection

The claims stand or fall as a single group. The grounds for rejection of Claims 61 and 62 are unsound because the Examiner is improperly construing the disclosure of Brady in rejecting the claims on appeal because Brady fails to disclose ***forming the flexible joints from the tensioning member*** as required by Applicant's claims. In contrast Brady uses a joint 22 and states in column 5, lines 37-39, "...A preferred location of the line 27 is around the pivotal connections 22 between the roof members 11

and wall members 21..." In Brady, his joint 22 is a separate structure and his line 27 does not function as a joint, contrary to Applicant's invention. Fig. 20 of Brady appears to best illustrate his structure, showing a line 27 stretching across a pivot or hub member 45

REJECTION UNDER 35 U.S.C. §102(b)

A careful analysis of the Brady Disclosure reveals that the joint 22 contemplated by Brady is not the same or equivalent to the joint used in Applicant's invention.

Brady Disclosure

Brady discloses a structure in some respects like Applicant's structure with the major different being that his joint are not formed by a tensioning member.

> As shown in FIGS. 1 through 5, it comprises a unitized foldable tent frame 10 that includes a plurality of elongated roof members 11, each having an upper end 12 pivotally joined at a common location by a central hub 13. The pivotal movement of the elongated roof members 11 at the central hub 13 includes rotation from the folded position 14, as seen at FIG. 1 where the roof members 11 are substantially parallel; through intermediate position 15 as seen at FIG. 2; through intermediate position 16 as seen at FIG. 3, whereat the roof members 11 essentially form a plane by radially extending from the central hub 13; through a raised position 17 as seen at FIG. 4; to the final raised and locked position 18 as seen in FIG. 5. The central hub 13 may be formed like the hub member 45 portion of the perimetric hub 44, the hub member 45 design allowing the full rotation by the pivotally attached roof members 11 which is required for the central hub 13.
>
> As viewed with the tent frame 10 raised, the lower end 19 of each roof member 11 is pivotally connected to an upper end 20 of at least one elongated wall member 21, ***where the perimeter pivotal connection 22 may range in construction from a simple hinge (not shown) to the locking perimeter hub 44 subsequently described***. The range of rotation of perimeter pivotal connection 22 varies from the roof member 11 and

wall member 21 being substantially parallel in the folded position 14 of FIG. 1, through the intermediate positions 15 and 16 of FIGS. 2 and 3, respectfully, to the raised positions 17 and 18 of FIGS. 4 and 5. ***It is desirable that the perimeter pivotal connection 22 be capable of being locked when in the raised position 17 to provide structural stability***.

With the roof members 11 and wall members 21 pivotally joined as described, the unitized foldable tent frame 10 may be collapsed into a compact folded position 14 as seen at FIG. 1, which allows the unitized foldable tent frame 10 to be conveniently stored and transported. Initially, the individual tent raiser would laterally extend the lower end 23 of the wall members 21 outwardly, as seen in FIG. 2, to approximately their final position 24 upon the ground, where the lower ends 23 of the wall members 21 are restrained to prevent inadvertent movement during the raising process. Next, the roof members 11 are progressively raised, as by upward pressure 25 at the central hub 13, through intermediate position 16 where the roof members 11 are essentially planar in their radial extension from the central hub 13 as shown at FIG. 3, to the fully raised position 17 of FIG. 4. In the fully raised position 17, if the relative position of the roof members 11 could be maintained, the foldable tent frame 10 would remain erect. While it may be possible to maintain the relative position of the roof members 11 by locking their pivotal movement at the central hub 13, such locking would be difficult to accomplish because of the normally elevated height of central hub 13 in the fully raised position 17. A second alternative is to lock the pivotal movement at the perimeter pivotal connections 22 about the perimeter of the foldable tent frame 10. However, it would be extremely difficult, if not impossible, for one individual to physically hold central hub 13 in the raised position while at the same time locking the perimeter pivotal connections 22. ***A third alternative, and a part of the present invention, additionally involves a perimetric interconnection 26 of the roof members 11 which, at least temporarily, retains the tent frame 10 in a raised position 17 by retaining the relative spacing between the lower ends 19 of adjacent roof members 11, while the individual user proceeds to lock the perimeter pivotal connections 22***.

Such means of perimetric interconnection 26 may include ***a line 27***, such as a cord, rope, wire, chain, or string, which continuously extends about the perimeter of the raised tent frame 10 so as to form a loop whose perimeter length may be varied as required. A preferred location of the line 27 ***is around the pivotal connections 22*** between the roof members 11 and wall members 21. Upon elevating the central hub 13 to the raised position 17, the line 27 could then be tightened at its raised position 17 perimeter length thereby supporting the foldable tent frame 10 in that position 17. This is best seen at FIG. 19 where the foldable tent frame 10 is shown in the raised position 17, as held by line 27 without the use of the subsequently discussed elongated tubular eave members 32. It should be

noted that, once beyond the intermediate position 16, the individual may be able to continue the raising motion by simply reducing the perimeter length of the line 27, thereby pulling the perimeter connections 22 closer together which causes the central hub 13 to continue to rise. Upon reaching the raised position 17, the line 27 may be tied off as seen at 28, to retain its length thereat, so that the individual tent raiser then is free to proceed to further stabilize the temporarily raised foldable tent frame 10.

The line 27, in forming a perimetric interconnection 26, may be elastic, so that it is capable of expanding and contracting uniformly along its perimeter length. Thus, instead of the individual tent raiser needing to tie off as at 28 (FIG. 19) the line 27 at the desired perimeter length, an elastic line 30 would be capable, without further adjustment, of expanding as the central hub 13 was raised through the intermediate position 16 (FIG. 3) where the roof members 11 are coplanar, and the perimeter length of the line 27, 30 is at a maximum, and then contracting to the perimeter length where the central hub 13 remains elevated in the raised position 17. ***The elastic line 30 between the roof members 12, may either be continuous or formed in segments connected between each pair of adjacent roof members 1***2.

Once retained in a raised position 17 by a perimetric interconnection 26, ***additional stabilization would be performed by the tent raiser***. ***This would normally include the locking of the pivotal connections 22 between the roof members 11 and the wall members 21***. A preferred perimeter hub 44 with a locking capability is discussed subsequently.

Another important means of providing tent stability, where a means of perimetric interconnection 26, as described above, is utilized, is by the use of a plurality of elongated tubular eave members 32 which concentrically enclose the perimetric interconnections 26, between adjacent roof members 12. ***The tubular eave members 32, are pivotally connected to, and extend horizontally between, the pivotal connections 22 joining the roof members 11 and wall members 2***1. For purposes of folding and expansion, the elongated tubular eave members 32 are separable into multiple, preferably two, eave member sections 33 and 34, which are reconnected into a single continuous tubular eave member 32 when the folding tent frame 10 is in the raised position 17. The need for complete separation of the tubular eave members 32 into eave member sections 33 and 34, can be seen in the comparing the folded position 14 of FIG. 1 where the eave member sections 33, 34, as retained by the perimetric interconnection 26 threaded therethrough, would be substantially parallel, to the intermediate position 16, as seen in FIG. 3, where their inner ends 35 and 37 would be physically separated since the required lengthening or expansion of the perimetric interconnection 26 at position 16 produces a perimeter length which is greater than the total length of the tubular eave members 32. In the raised position 17, where the perimeter length of the

perimetric interconnection 26 is once again reduced, the inner ends 35, 37 of the eave member sections 33, 34 return to substantially abut, allowing reconnection into a continuous tubular eave member 32. Such connection 38 between tubular eave member sections 33 and 34 may be accomplished in a variety of ways, a simple and effective manner being a connection where the end 35 of one eave member section 33 frictionally fits tightly within a ferrule 36 molded with or attached to end 37 of the adjacent eave member section 34, as better seen in FIG. 6. When eave members 32 are utilized, the next step, once the tent frame 10 is retained in a raised position 17 by the perimetric interconnection 26, would be to connect the eave member sections 33 and 34 to form the complete tubular eave members 32, to be followed by the locking of the pivotal connections 22.

While the foldable tent frame 10, will have at least one wall member 21, extending downward from, and connected to, its pivotal connection 22 to each roof member 11, the preferred embodiment, as best seen in FIGS. 4 and 5, which provides a sturdier configuration, utilizes two elongated wall members 39 and 40 which are pivotally attached, at their upper ends 20, to the lower end 19 of each roof member 11 and extend divergently downward therefrom. The wall members 39 may be pivotally joined, in pairs, to the corresponding wall members 40 pivotally connected to adjacent roof members 12, at their lower ends 23. The preferred means of pivotal joinder 42 of the lower ends 23 of adjacent wall members 39, 40 provides flexible pivotal interconnection by means of a segment of flexible material, such as a cylindrical rubber section 41, attached between the lower ends 23, such joinder 42 providing the desired variability in position of the connected wall members 39, 40, particularly when leaving or approaching the folded position 14. It may be desirable not to join, but rather to leave spaced apart one pair of lower ends 23, so as to more readily provide an entrance opening to within the folding tent frame 10 and attached tent (not shown).

In these forms of the preferred embodiment, each perimetric pivotal connection 22 generally will involve the pivotal attachment of five elongated members 43, that is, one roof member 11, two tubular eave members 32, and two wall members 39, 40. ***Although other forms of perimetric pivotal connection 22 may be used, the preferred form is a perimeter hub 44 which includes a hub member 45, in disk-like shape having a plurality of projections 46, ten in the preferred unitized foldable tent frame 10 embodiments, which form radial U-shaped openings 47 equiangularly disposed about its perimeter and extending inwardly towards its center 48***. Within the radial U-shaped openings 47, the ends 49 of the elongated members 43 are pivotally attached, as by pivots 50, so as to be rotatable within the U-shaped opening 47. A hub lock member 51, of comparable size and shape to the hub member 45, also has a plurality, five in the preferred embodiments, of radial U-shaped openings 52 corresponding in size and angular location to the radial U-

shaped openings 47 of the hub member 45. Between adjacent radial U-shaped openings 52 of hub lock member 51, projections 53 extend radially outward.

The hub member 45 and hub lock member 51 are adjacently and rotatingly connected at their respective centers 48 and 54, as by pivot 55, so as to permit rotation about common axis 56 within parallel planes. Thus, when the hub lock member 51 is rotated so as to align its radial U-shaped openings 52 with the radial U-shaped openings 47 of the hub member 45, as seen in FIGS. 12-14, the perimeter hub 44 is in an unlocked position 60, with the elongated members 43 having unimpeded rotational capability upon the hub member 45, as seen at 69 in FIG. 14. However, when the hub lock member 51 is rotated about axis 56 so that its projections 53 coincide with the radial U-shaped openings 47 of the hub member 45, as seen in FIGS. 15-17, the elongated members 43 cannot pivot through the projections 53 and thus are denied rotation. The hub-lock member 51 may have radial grooves 57 formed upon the projections 53 to detentingly engage the elongated members 43 in a locked position 58, and may also have bevelled surfaces 59 adjacent to its U-shaped openings 52 so as to make easier the initial rotation of the hub lock member 51 from the unlocked position 60 to the locked position 58.

The perimetric interconnection 26 may be attached to the perimeter connections 22 by various manners. FIG. 20 illustrates a means of attachment of the perimetric interconnection 26 in the form of a continuous line 27, 30 wherein, being enclosed within the elongated tubular eave member 32, the line 27, 30 exits through an aperture 65 formed near an outer end 66 thereof, ***crosses the hub member 45, and re-enters another elongated tubular eave member 32 at a corresponding aperture 67 formed at its outer end 68***.

The emboldened, italized, and underlined portions of the Brady disclosure discussing the nature of his joints 22 joining triangle sections of the Brady frame make it clear that Brady's joints 22 are separate from his "tensioning member" line 27. In other words, the Brady line 27 ***does not function as a flexible joint and does not form the joints 22 of his structure***. Consequently, due to this structural difference, the Brady structure fails to function in the same manner as Applicant's structure. In accordance with Applicant's invention, the "tensioning member" forms part of the joint, which joint does ***not lock*** in position separate from the

tightening of the "tensioning member." This is because the joint of Applicant's invention is the portion of the "tensioning member" passing between the adjoining collapsible members as shown in FIGS. 4 and 5 of the Applicant's disclosure. Brady does not disclose this joint structure as illustrated in FIGS. 4 and 5 in Applicant's drawing and set forth in the claims on appeal. Consequently, the Examiner's rejection of the claims on appeal under 35 USC 102(b) as being unpatentable over Brady 5,423,341 should be reversed as the following ARGUMENT of each independent claim on appeal sets forth:

ARGUMENT WITH RESPECT TO EACH INDEPENDENT CLAIM ON APPEAL

Claim 61 The collapsible support structure of Claim 61 calls for "... a plurality of interconnected frame sections..." each including "... first and second elongated rigid members each having first and second ends, said first ends of the first and second elongated rigid members being operably connected together to form a first flexible joint, and a collapsible elongated member operably connected between the second ends of the first and second elongated rigid members..." Central to Applicant's invention is "...a portion of an elongated flexible tensioning member extending through..." a pair of rigid tubular members. Applicant uses this flexible tensioning member in a manner that is different than Brady. As set forth in Claim 61 the tensioning member is ***"...operably connected between the second ends of the first and second elongated rigid mem***bers ***to form second flexible joints thereat, each***

said second flexible joint being operably connected to an adjacent frame section." Brady does not form the ***flexible joints from the tensioning member passing through a pair of rigid tubular members.***

Claim 62 The collapsible support structure set forth in Claim 62 again distinguishes Applicant's invention from Brady because it calls for "...a collapsible elongated member ... including a pair of tubular members and an elongated flexible tensioning member extending through said tubular members and ***operably connected between the second ends of the first and second elongated rigid members and to adjacent frame sections to form at each second end a flexible joint.*** Again its is this flexible tensioning member that forms a flexible joint and also passes through the tubular members that differentiates Applicant's invention from Brady.

Claims Appendix A

Rejected Claims 61 through 62 are set forth in Appendix A.

Evidence Appendix B

None

Related Proceedings Appendix C

There are no related proceedings.

Respectfully submitted,

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APPENDIX A

Claims on Appeal

61. A collapsible support structure comprising

a plurality of interconnected frame sections each comprising

first and second elongated rigid members each having first and second ends, said first ends of the first and second elongated rigid members being operably connected together to form a first flexible joint, and

a collapsible elongated member operably connected between the second ends of the first and second elongated rigid members, said collapsible elongated member having a rigid state and a collapsed state and comprising

a pair of rigid tubular members having a portion of an elongated flexible tensioning member extending through said pair,

a rigidizing member mounted to move along said pair, said rigidizing member being moveable into a position to engage each rigid tubular member when said rigid tubular members are essentially axially aligned to form the rigid state of the collapsible elongated member,

said tensioning member being operably connected between the second ends of the first and second elongated rigid members to form second flexible joints thereat, each said second flexible joint being operably connected to an adjacent frame section.

62. A collapsible support structure comprising

a plurality of interconnected frame sections each comprising

a pair of elongated rigid members each having first and second ends, said first ends being operably connected by a flexible joint, and

a collapsible elongated member having a collapsed state and a rigid state, said collapsible elongated member including a pair of tubular members and an elongated flexible tensioning member extending through said tubular members and operably connected between the second ends of the first and second elongated rigid members and to adjacent frame sections to form at each second end a flexible joint.

EVIDENCE APPENDIX B

None

RELATED PROCEEDINGS APPENDIX C

None